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Signal

MONTHLY WEATHER REVIEW,

JANUARY, 1877.

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In compiling the present REVIEW, the usual data received up to February 14th have been made use of. The most noticeable features for the month are: The severe coast storm of the 1st and 2nd; the increasing severity of storms as they approached the Gulf of St. Lawrence; the continuance of the cold weather of December until after the middle of February, giving low average temperatures for the districts east of the Rocky Mountains; generally, a deficiency in the precipitation; the destructive ice-gorges in Ohio and Monongahela rivers; the closing of many harbors by ice, from the Potomac northeastward, until after the middle of the month.

BAROMETRIC PRESSURE.

The general distribution is represented upon Chart No. II. The highest reading for the month, 30.91 in., was observed at Breckenridge, night of the 11th, during the advance of high pressure No. III; lowest, 28.76 in., at Sydney, 11 p. m., 2nd. The average of the barometric readings at Fort Sully is 30.16 in.

Ranges in Barometer.—Portland, Or., 0.95 in.; San Francisco, 0.81; San Diego, 0.41; Rocky Mountain stations, 0.65 to 1.54; plains of Nebraska and Kansas, 1.39 to 1.56; northern Texas and Indian Ty., 1.10 to 1.24; Missouri valley, 1.14 to 1.31; Red River of the North valley, 1.29 to 1.38; Upper Miss. valley, 0.90 to 1.27; Upper Lake region, 0.87 to 1.35; Lower Lake region, 1.03 to 1.28; Ohio valley and Tenn., 0.98 to 1.24; New England, 1.42 to 1.75; Middle States, 1.05 to 1.49; South Atlantic States, 0.85 to 1.16; Gulf States, 0.75 to 1.10; Key West, 0.51.

Areas of High Pressure.—During the first part of the month they were more frequent than during the last part. The high-pressure area, designated as No. IX in the December Review, and central over Tenn., on the morning of the 31st, covered the Middle States morning of the 1st, but with diminished pressure, after which it rapidly disappeared in advance of No. I.

No. I.—It was observed morning of the 1st in the Northwest, with minimum temperatures from 25° to 29° below zero in the Red River of the North valley. Snow-fell in central Dakota. By morning of the 2nd the pressure had increased, with a barometric reading of 30.73 in. at Yankton. The area of 0° minimum temperature extended into the eastern portions of Nebraska and Kansas, Missouri, Illinois, Indiana and Wisconsin. During the day it moved southward, and, at 7:35 a. m. of the 3rd, was central in northern Texas, producing a light "norther" on the coast. From Tennessee northeastward over the central portion of the Middle States, in the St. Lawrence valley and northern New England, the temperature fell below 0° . On the morning of the 4th it covered the Southern States, with diminished pressure, being central in Alabama. The minimum temperature continued below 0° from the St. Lawrence valley and New England to the central portion of the Middle States. By the following morning, in advance of low pressure No. II, it moved to the South and Middle Atlantic coasts, with continued cold weather in the Atlantic States. During the 5th and 6th it gradually disappeared northeastward along the coast.

No. II.—During the day and night of the 6th, in rear of low pressure No. III, it advanced southeastward over the Northwest. At Breckenridge the temperature fell from 24° to -18° within twenty-four hours. High northwesterly winds were produced in Dakota and Minnesota, reaching 70 miles per hour at Pembina. The 7th, it rapidly extended south and eastward, with a decided fall in the temperatures. Morning of the 8th it was central in Indian Territory. Minimum temperatures from 20° to 32° below zero were reported from Dakota and Minnesota, and below zero from the Upper Lakes to Kansas and Missouri. A very severe "norther" was produced, reaching 44 miles at Indianola and 62 at Galveston, in connection with low pressure No. IV, and for which Cautionary Signals had been ordered the evening of the 7th. The

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